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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/900,426	07/06/2001	Andrew Daiber	NUFO002	4971

7590 03/10/2004

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EXAMINER

VY, HUNG T

ART UNIT	PAPER NUMBER
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2828

DATE MAILED: 03/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/900,426

Applicant(s)

DAIBER ET AL.

Examiner

Hung T Vy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 31-51 and 55-60 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 31-51 and 55-60 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Paul Ip
PAUL IP

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TECHNOLOGY CENTER 2800

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. In response to the amendment filed on 01/12/2004, claims 31-51 and 55-60 are pending in this application as a result of the addition of claims 56-60 and the cancellation of claims 52-54.

Claim Rejections - 35 U.S.C. § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 31-51 and 55-60 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Flanders, U.S. Patent No. 6,366,592 in view of Prior et al., U.S. Patent No. 5,418,800.

Regarding claims 31, 43, 49, and 55-60, Flanders discloses a method and a laser apparatus, comprising: a gain medium (422) having an active region to emit an optical beam along an optical path (See column 6, line 61-68); first (412) and second reflectors (117) positioned in the optical path and defining a laser cavity, the first reflector (412) to reflect a portion of the optical beam as a feedback optical beam to the active region (422)(see fig. 10); an optical element (410) positioned in the optical path to induce a wavelength deviation in the feedback optical beam (See fig. 10 and column 9,

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line 7-24), the control system (354) to deviate a nominal operating setting of the optical element (410) to induce the wavelength deviation(See fig.10) but Flanders does not disclose a voltage sensor operatively coupled to the gain medium to monitor voltage across the active region. However, Prior et al. discloses a voltage sensor (9) operatively coupled to the gain medium (1) to monitor voltage across the active region (1)(See fig. 1-3), the wavelength deviation of the feedback optical beam to induce a voltage (9) change across the active region (1) and a control system (12) operatively coupled to the voltage sensor (9) and to the optical element, the control system further to adjust the nominal operating setting in response to the voltage change to tune the optical element (See column 3, line 66-68 and column 4, line 1-18). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify Flanders to have a voltage sensor operatively coupled to the gain medium as taught by Prior et al. because those skilled in the art will recognize that such modification and variations can be made to get better control wavelength without departing from the spirit of the invention.

Regarding claims 44-48, Flanders discloses the laser apparatus wherein the control system further to dither (714), a dither element (410) to dither the nominal operating setting of the optical element; and an adjustment element (714) to adjust the nominal operating setting of the optical element (See column 9, line 7-24) as optical element (412) can change the length cavity (See fig. 10).

With respect to claims 32-42, the methods for operating a laser are considered as product by process steps.

Regarding claim 50-51, Flanders discloses the optical element comprises one of a grid generator (714, 716), a channel selector (354), and an electro-optic tuning element (410), and a nominal temperature of the optical element (See column 3, line 57-65 and Fig. 10).

Citation of Pertinent References

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The patent to Burke et al. discloses Multi-stable Cavity Procesor, U.S. Patent No. 5,245,626.

The patent to Niki discloses Optical Pulse Oscillator and Light Frequency measuring Apparatus Using the Same, U.S. Patent No. 5,222,070.

Response to Arguments

4. Applicant's arguments with respect to claims 31-51 and 55-60 have been considered but are moot in view of the new ground(s) of rejection.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Vy whose telephone number is (571) 272-1954. The examiner can normally be reached on Monday-Friday 8:30 am - 5:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul IP can be reached on (571) 272-1941. The fax numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


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